

REMARKS

Claims 3, 8 and 29-34 are pending in the application. Claims 3 and 8 have been amended. Claims 4-7 have been cancelled. Claims 29-34 are new claims.

The Office has affirmed and made final the restriction requirement in view of Applicant's election of the Group II claims 3-8. The Office asserts that claims 27-28, which are also withdrawn, are a separately classifiable group because claim 1 is drawn to a method of improving a product, not a method of making one as in the other claims. We fail to understand this distinction because claim 1, claim 3, and claim 27 all refer to a method for increasing the specific activity of a glycosyl hydrolase on a substrate. Therefore, the distinction argued by the Office does not exist. Also, claim 26 is generic to the method for increasing specific activity. Reconsideration of the restriction requirement is respectfully requested, particularly in regard to claim 27 which combines the limitations of claims 1 and 3 to provide a true linking claim.

Claim 3 has been amended to include the features of claim 27, emphasizing that these claims are related. Claims 4-7 have been cancelled because claim 3 now recites the limitations of these claims. The limitations of former claims 3-8 are set forth in new claims 29-34, which have been corrected to overcome the §112 second paragraph objections noted on pages 3-5 of the Office action dated July 25, 2003. Amended claim 3 also addresses and overcomes the §112 first paragraph rejection by incorporating the limitations of claims 6 and 7, which were not subject to the §112 first paragraph rejection.

The office objects to the phrases "increasing" and "not strongly" because they are not quantified. The objections are rendered moot by the amendment to claim 3; however, these terms reappear in new claim 29 et seq. Applicant is entitled to use terms that are

understood by those skilled in the art and has provided a teaching that, by way of example, gives meaning to these terms in the specification. These terms mean an appreciable difference and are not indefinite because they are understood by those skilled in the art to mean as much, for example, by removing Vander Waals stabilization of the cellulose substrate (see paragraph 25 of the published application). Also, examples of increases are shown in Table 2. We respectfully traverse the rejection and request it to be reconsidered and withdrawn. It is not required that these terms be quantified numerically. Claims 29-34 are in accord with the mode of operation.

The sole remaining rejection is the §112 first paragraph rejection of claims 3-5 and 8, where these claims are represented as claims 29-31 and 34. The Office argues that the scope of these claims is broader than the enabled scope of invention under the factors of *In re Wands*, 8 USPQ2d 1400 (Fed. Cir. 1988). In essence, the Office notes that Applicant has shown an improvement in activity by replacing tyrosine at position 245 in glycohydrolase from *A. cellulolyticus*, but has not provided knowledge or guidance as to how this might be done outside the limited scope of the enabled species. Such knowledge may be found, by way of example, in paragraph 25 of the published application and in the table there following, which shows analogous substitution sites in glycosyl hydrolase family enzymes. The referenced passage provides, by way of example, a rationale or theory for making such substitutions in a genus as have been shown to work in the illustrated species. It is not the case that the disclosure is limited to a single species.

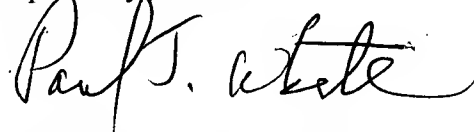
The level of ordinary skill in this art is high. It is not the case that knowledge, rationale or guidance are lacking for the broader scope of enablement. The determination

of what level of experimentation is "undue," so as to render a disclosure non-enabling, is made from the viewpoint of persons experienced in the field of the invention. See *Enzo Biochem*, 188 F.3d at 1373-74 (discussing evidence of enablement and nonenablement in an unpredictable field of biotechnology). "The determination of what constitutes undue experimentation in a given case requires the application of a standard of reasonableness, having due regard for the nature of the invention and the state of the art." *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). In *Wands* the court observed that "[t]he test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed" *Id.*, quoting *In re Jackson*, 217 USPQ 804, 817 (Bd. App. 1982).

We respectfully submit that the disclosure is enabling as to claims 29-34 for the reasons explained above and, consequently, solicit a notice of allowance.

The Commissioner is authorized to charge any additionally required fees to deposit account 14-0460. Should the Examiner have any questions, comments, or suggestions that would expedite the prosecution of the present case to allowance, Applicants' undersigned representative earnestly requests a telephone call at (303) 384-7575.

Respectfully submitted



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